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ABSTRACT

This paper reports an exploratory study in nonverbal communication, which had two objectives: (1) to look closely at touching as a communicative behavior and to describe the categories of behaviors; and (2) to evaluate the "Form for Observation of Physical Contact," developed in a previous study. A total of 47 3-, 4-, and 5-year-olds, grouped in pairs, were observed watching the 3-1/2 minute film "Dinosaurs." All touching behaviors between the paired subjects were recorded in diary fashion from behind a one-way screen. Findings demonstrated that touching as a communicative behavior can be observed and categorized. The quantitative aspects of the behaviors exhibited, comparisons between age groups in the number of touching contacts, the differences in rank orderings of categories, and the development of a selected sample of individual children's touching behavior are described. In the evaluation of the "Form for Observation of Physical Contact," the seven original categories of behavior were found useful, but six more categories were defined and added to more adequately cover the range of observed behaviors. Seven areas of possible questions arising from this study are discussed and operational definitions for the 13 behavior categories are given. Four appendices are included. (SDH)

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Center for Young Children
Occasional Paper Number Eleven

TOUCHING: COMMUNICATION DURING A QUIET ACTIVITY

Center for Young Children
College of Education
University of Maryland
July 1973

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FOREWARD

Touching: Communication During a Quiet Activity is released with the intent of adding to our knowledge about the vital human process of affection. Building upon the earlier work of the Center for Young Children described in Occasional Paper One, Preliminary Investigation into Moral Behavior with an Emphasis Upon Perception of Physical Contact by Five Year Olds, Mrs. Mary Lou Anderson has refined and enlarged the work begun by the earlier research team.

The Center wishes to express its appreciation to Mrs. Anderson for her thoughtful analysis of the concept of touching and for her willingness to share her work with those eager to learn more about how an understanding of touch can lead to increased knowledge about the young child.

Louise M. Berman
Professor and Director
Center for Young Children

ACKNOWLEDGEMENTS

I want to thank Dr. Jessie A. Roderick and Dr. Louise M. Berman for the skillful teaching and the inspiration which they gave during the Project on Involvement team research, Spring, 1973, which is the genesis of this exploratory study.

I also sincerly appreciate the support of the total staff of the Center for Young Children, University of Maryland, especially the cooperation of three teachers: Mrs. Marion D. Leiserson, Mrs. Sandra Angel and Mrs. Susan H. Akman. Finally, I gratefully acknowledge the help of the following student teachers: Barbara Back, Jeanne Holets, Jo Lynn Smith, Rosalind Smith and Robert Blasco.

Mary Lou S. Anderson

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PREFACE

Louise M. Berman, Professor and Director of the Center for Young Children, University of Maryland, describes the characteristics of the studies done at the Center in Occasional Paper Number Two.[1] She lists these three characteristics:

1. Utilization of naturalistic research techniques.
2. Researchers are encouraged to build cumulative knowledge on a topic.
3. Studies are cooperatively developed.

My research for this paper, "Touching: Communication During a Quiet Activity," grew out of my having participated in the on-going team research of the Center. From my experience with this team, consisting of two professors, Professors Louise Berman and Jessie Roderick, several advanced graduate assistants, and a small group of graduate students (from diverse disciplines) enrolled in course work with the professors, I have developed a great respect for and interest in this method of research.

I desired further experience in this method of research in the "natural environment" of the child--the classroom. However, as a kindergarten teacher returning in the fall to a self-contained classroom, it probably will not be possible for me to utilize the team approach. It seemed that the opportunity to utilize the Center facilities, with the possibility of observing while not being actively involved in the teaching process, should not be "lost"; it seemed to me that further independent research would be a good transition from the team research methodology to the on-the-job classroom evaluation which <u>could</u> become active classroom research.

It was from these experiences and this thinking that my exploratory research and this paper have evolved.

Mary Lou Anderson

INTRODUCTION

My background, including professional education and experiences in Early Childhood Education and Human Development, leads me to write from a very personal viewpoint. I tend to expand from the inside outward; I feel a kinship with the writing of Carl Rogers who often writes from this view point. However, I realize the grave danger of "lack of objectivity" when adopting the personal viewpoint. Therefore, although the comments and thoughts expressed may be first-person singular, the findings of the study are as objective as possible.

The purposes of this exploratory study, "Touching: Communication During a Quiet Activity" were two:

1. To look closely at touching as a communicative behavior during a time when children are supposedly engaged in a quiet activity, and to describe the categories of behaviors observed.
2. To evaluate the "Form for Observation of Physical Contact".[2] It is hypothesized that the categories in this form are not complete enough to cover the range of touching contacts children may exhibit when sitting together during a quiet activity.

It became necessary in the progress of the study to modify and extend the first purpose in this manner:

1. Add, following the final word, observed, ... and compare the touching behaviors of three classrooms of children, ages three, four and five.

Monograph 1, Toward New Programs for Young Children, outlines "five areas which the staff deemed significant in programs for young children. These areas are Communicating, Decision Making, Knowing, Creating, and Dealing with Observable Conflict." I have looked at only one of these areas, Communicating, in my study. With full realization that all five areas are important and interrelated, my personal belief is that teachers must be skilled in the communication arts, and must be sensitive to others who are striving to communicate with them, either verbally or non-verbally.

My experience, both in nursery school and kindergarten teaching, has been that children in the Early Childhood years express many of their communicative needs through non-verbal channels. Non-verbal communications can include such areas as gestures, facial expressions,[4] body position and physical contact.[5] As a classroom teacher I have long been conscious that I "read" my students' behavior in an attempt to discover more about each child. Often, the words a child expresses are not as accurate an indicator of "communication" as are his or her non-verbal behaviors. I have also been aware that for most children, the younger the child, the more he "talks" with body language. Therefore, in my exploratory study of communication in young children, I decided to concentrate on the non-verbal area of physical contact communication, touching.

Occasional Paper Number One, Preliminary Investigation Into Moral Behavior with an Emphasis Upon Perception of Physical Contact by Five Year Olds,[6] while not focusing on

communication, did develop a "Form for Observation of Physical Contact", which was used to observe children in the classroom setting. This instrument seemed appropriate to use in exploring the area of touching as communication.

In considering the subject, touching, the most comprehensive source of understanding for me has been Ashley Montagu's book, TOUCHING: The Human Significance of the Skin.[7] Dr. Montagu looks at the skin as a sensory organ, the largest, which is intimately involved with the development of the person. I find myself in agreement with his thesis. In addition, attention should be called to the extensive References[8] in this book which link the social sciences to the biological sciences, and which include names familiar to educators, among them H. F. and M. K. Harlow, J. Van Lawick-Goodall, M. A. Ribble, L. S. Kubie, G. Stanley Hall, S. Freud, R. A. Spitz, M. Mead, and many, many others.

PROCEDURES

The original research proposal stated that:

1. The setting would be Mrs. Marion Leiserson's Four-Year Group of children.
2. A small theater would be built within the classroom, using a three-fold screen of wood, and pieces of cardboard covered with bright contact paper. It would be positioned so that a pair of children sitting on a soft wall-to-wall rug in the theater would be clearly visible to the researcher, behind the one-way viewing screen in the observation booth.
3. A continuous loop film projector, placed on a hollow block "table" at the front of the theater would project the three and one-half minute film titled "Dinosaurs" on a white cardboard screen at the front of the miniature theater.
4. The seventeen children would be voluntary subjects, and would have the option of accepting or rejecting the invitation to view the film.
5. The children would see the film in <u>pairs only</u>, with as much self-selection of partner as possible within the limits of the class and the stipulation that no one was to see the film twice until every child had had one turn.
6. The assistance of one student teacher would be required. She would assist the children into the theater, list their names on the form provided

and start and stop the film. She would also set a timer, so that each pair of children would see the film for three and one-half minutes.

7. The observer would use a modification of the "Form for Observation of Physical Contact" which would be appropriate for pairs of children (observation of two students simultaneously). The original categories of physical contact and the definitions[9] would be retained. These data would be recorded in diary fashion and coded during the observations. The categories are:

    (1) Aggressive
    (2) Attention Getting
    (3) Fear
    (4) Required Contact
    (5) Accidental
    (6) Other
    (7) Affectionate

These seven procedures were followed. In looking at the data from the eight pairs of children who attended class on the two days of the study, Friday, April 6th and Monday, April 9th, it became evident that the results were quite inconclusive.

Permission was sought, and obtained, to speak to the other three teachers in the Center, to describe the project, and to ask if any of them would feel that this research project would be of interest to her children and would fit into her program. This meeting resulted in two teachers, Mrs. Sandra Angel and Mrs. Susan H. Akman, joining the study. The procedures were replicated in Mrs. Angel's group of fives and Mrs. Akman's group of threes.

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FINDINGS

A. A Comparative Description of the Touching Behaviors of Three, Four and Five Year Old Children

The findings of this study can only be interpreted as describing behaviors of children of three, four and five in three classrooms in the Center for Young Children, Spring, 1973, because this was strictly an exploratory study. However, the questions raised by these findings may well raise further questions which might be answered in a larger, more sophisticated study.

The first series of findings, expressed in Tables 1, 2, and 3, gives an overview of the entire study, showing the composition of the pairs, the number of behaviors displayed by the pairs in each category of the study, the total number of touching behaviors for each pair, the total number of touching behaviors for each category, and the grand total of touching behaviors displayed by each classroom. For example, the eight pairs of children from the Three Year Group displayed a total of 55 behaviors, while the eight pairs of children from the Four Year Group displayed a total of only 24 touching behaviors. This would seem to indicate touching communication decreases with age. However, the nine pairs of children in the Five Year Group displayed a total of 64 touching behaviors.

An analysis of the composition of the pairs indicates that the male-female pairing occurs once in eight pairs of Threes, twice in the pairs of Fours, and twice in the pairs of Fives.

The children in the Center come from a population which

includes various economic levels as well as many racial and ethnic backgrounds. An analysis of the pairs of children in each of the three classrooms shows that the findings are very inconclusive as to whether or not racial or ethnic background contributes to more or less touching.

Table 1

THREE YEAR GROUP
OVERVIEW OF TOUCHING BEHAVIOR
BY PAIR AND BY CATEGORY

Categories of Touching Contacts	Pairs Identified by Number and Sex																Total by Category
	#1		#2		#3		#4		#5		#6		#7		#8		
	M*	M	M	M*	F	M*	F*	F	F*	F*	M	M*	?	F	F*	F*	
Agressive	5		0		0		0		0		0		5		1		11
Attention-getting	0		0		0		0		0		0		1		0		1
Fear	0		0		0		0		0		0		0		0		0
Required contact	0		0		0		0		0		0		0		0		0
Accidental	2		2		4		0		0		0		1		0		9
Other	5		1		0		2		10		0		1		1		20
Affectionate	0		0		0		0		1		0		0		13		14
Total by pair	12		3		4		2		11		0		8		15		55

Fourteen children (two "repeats," two absent) in eight pairs from a class of eighteen.
Average number of contacts: 3.437
* Child of foreign or minority background.

Table 2

FOUR YEAR GROUP
OVERVIEW OF TOUCHING BEHAVIOR
BY PAIR AND BY CATEGORY

Categories of Touching Contacts	Pairs Identified by Number and Sex																Total by Category
	#1		#2		#3		#4		#5		#6		#7		#8		
	M	M*	M	M	M*	M	F	M	F*	F*	F	F	M	M	M*	F	
Agressive	0		0		0		0		0		0		0		0		0
Attention-getting	0		0		1		0		0		0		0		0		1
Fear	0		0		0		0		0		0		0		0		0
Required contact	0		0		0		0		0		0		0		0		0
Accidental	2		0		0		1		0		0		2		3		8
Other	2		0		0		9		0		2		1		1		15
Affectionate	0		0		0		0		0		0		0		0		0
Total by pair	4		0		1		10		0		2		3		4		24

Sixteen children (two absent) in eight pairs from a class of eighteen.
Average number of contacts per pair: 1.5
* Child of foreign or minority background.

Table 3

FIVE YEAR GROUP
OVERVIEW OF TOUCHING BEHAVIOR
BY PAIR AND BY CATEGORY

Categories of Touching Contacts	Pairs Identified by Number and Sex																		Total by Category
	#1		#2		#3		#4		#5		#6		#7		#8		#9		
	M	M	M*	F	M	M*	F	F	F*	F*	M	M	F	F	M	F	M*	M	
Aggressive	0		0		0		0		0		0		0		0		1		1
Attention-getting	0		1		0		0		0		0		0		0		0		1
Fear	0		0		0		0		0		0		0		0		0		0
Required contact	0		0		0		0		0		0		0		0		0		0
Accidental	8		3		5		4		4		0		2		4		1		31
Other	6		4		2		0		4		3		7		1		2		29
Affectionate	2		0		0		0		0		0		0		0		0		2
Total by pair	16		8		7		4		8		3		9		5		4		64

Seventeen children (one "repeat," five absent) in nine paris from class of twenty-two.
Average number of contacts per pair: 3.6
* Child of foreign or minority background.

Table 4, which is on the following page, shows the Rank Order of the categories of touching contacts in each of the three classrooms. This Rank Order is based on the total number of contacts in each category, as shown in Tables 1, 2 and 3. The interesting category, Other occupies first position in both the Three and Four Year Groups, while Accidental is first in the Five Year Group. In second position, the categories were different for each group: the Threes, Affectionate, the Fours, Accidental, and the Fives, Other. There was a split also in regard to the third position: the Threes, Aggressive, the Fours, Attention-getting, and the Fives, Affectionate.

A more precise picture of the Touching behavior in each classroom is shown in Table 5, which lists each of the seven touching categories, gives the number of touching behaviors in the category, and the percentage figure for that category as it compares to the total number of touching behaviors in each class. For example, although Other occurred most often in both the Three and Four Year Groups, it occurred in 36% of the touching behaviors of the Threes and 63% of the touching behaviors of the Fours: this same category, Other ranked second in the Fives and occurred in 45% of the total touching behavior. This table shows quite clearly that the Threes touching contacts were dispersed quite evenly among their first four category ranks, while both the Fours and the Fives concentrated most of their touching behavior in only two categories. It is interesting to note that the Fours displayed only three categories, Other, Accidental and Attention Getting.

Table 4

RANK ORDER
OF THE
NUMBER OF TOUCHING CONTACTS BY PAIRS

Categories of Touching Contacts	Age		
	Threes	Fours	Fives
Aggressive	3	0	4.5
Attention-getting	5	3	4.5
Fear	0	0	0
Required contact	0	0	0
Accidental	4	2	1
Other	1	1	2
Affectionate	2	0	3

Table 5

TOUCHING CATEGORIES
EXPRESSED AS PERCENTAGES OF TOTAL CONTACTS

Categories of Touching Contacts	Age					
	Threes		Fours		Fives	
	Number	%	Number	%	Number	%
Agressive	11	20	0	0	1	2
Attention-getting	1	2	1	4	1	2
Fear	0	0	0	0	0	0
Required contact	0	0	0	0	0	0
Accidental	9	16	8	33	31	48
Other	20	36	15	63	29	45
Affectionate	14	25	0	0	2	3

Table 6 was prepared to show data which indicates the variations in the number of touching contacts by pairs within each class and also among the three classes. The Threes exhibited the greatest range in the occurrences of touching behaviors, from zero contact to fifteen contacts. The Fours showed the smallest range, with two pairs exhibiting zero contacts, and the greatest number recorded was ten contacts. In addition, the other seven pairs were clustered at the low end of the scale, four contacts or lower. The Fives touching behavior by pairs ranged from a low of three contacts to a high of sixteen contacts, with eight of the nine pairs grouped between three and nine touching contacts.

A selected sample of individual children's touching behavior is shown by category in Table 7. Each child in the total study who exhibited five or more touching behaviors is listed. There were three children in the Three Year Group, two girls and one boy. Male B in Pair #1 displayed extremes of behavior, with 5 instances of Aggressive touching and 5 instances of Other touching. Female A in Pair #5 showed 6 instances of Other touching and one Affectionate touching. Female A in Pair #8 displayed 12 examples of Affectionate touching.

Table 6

VARIATIONS
IN THE
NUMBER OF TOUCHING CONTACTS BY PAIRS BY AGE

Age	Number of Contacts																
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Three-year group (8 pairs)	1		1	1	1				1			1	1			1	
Four-year group (8 pairs)	2	1	1	1	2						1						
Five-year group (9 pairs)					1	2	1		1	2	1						1

Threes -- range: 0 - 15

Fours -- range: 0 - 10

Fives -- range: 3 - 16

Table 7

A SELECTED SAMPLE OF INDIVIDUAL CHILDREN'S TOUCHING BEHAVIOR

Categories of Touching Contacts	Three Year Group			Four Year Group	Five Year Group				
	Pair 1 Male B	Pair 5 Female A	Pair 8 Female A	Pair 4 Female A	Pair 1 Males A	Pair 1 Males B	Pair 2 Female B	Pair 3 Male A	Pair 7 Female A
Agressive	5	0	1	0	0	1	0	0	0
Attention-getting	0	0	0	0	0	0	1	0	0
Fear	0	0	0	0	0	0	0	0	0
Required contact	0	0	0	0	0	0	0	0	0
Accidental	1	0	0	1	4	4	2	3	1
Other	5	6	1	7	3	3	3	2	6
Affectionate	0	1	12	0	1	1	0	0	0
Total by individual child	11	7	14	8	8	8	6	5	7

B. An Evaluation of the "Form for Observation of Physical Contact"

The "Form for Observation of Physical Contact"[10] served as a most useful model to develop the modified Form[11] which was used, and which utilized the seven original categories: Aggressive, Attention-getting, Fear, Required Contact, Accidental, Other and Affectionate. Two categories, Fear and Required Contact, were not observed in this study.

A serious problem developed with the category, Other. It was used to cover a multitude of touching situations which were used in a communicative manner by children in this study. Recalling that this category ranked first or second with all three groups, it would seem that there is a need for more precise coding than the very non-descriptive word, Other.

By content analysis of the data, which had been recorded in diary fashion, the following categories were discovered under the heading Other:

1. Touching - Companionship
2. Touching - Expressive
3. Touching - Cognitive
4. Touching - Control
5. Touching - Extension of verbal communication
6. Touching - Exploratory-tactile

Further analysis indicates that some of these categories should be sub-divided into Individual and Mutual.

The six new touching categories would be in addition to the seven categories in the original list. It is suggested that Fear and Required Contact be retained because they might be necessary in further studies of touching contacts.

The remainder of this analysis will be a discussion of the proposed new categories.

1. Companionship

Children sought companionship as individuals and shared it as a pair. Therefore, the behavior can properly be coded as either Individual Companionship or Mutual Companionship.

Individual companionship was displayed by Threes many times as they tentatively sought tactile contact and had their partner withdraw contact. Some observed examples included:

A hand on a knee.
A hand on the head.
An arm against an arm.
A leg touching friend's body.

There were no incidences of this among the Fours, and the Fives confined themselves to one case of seeking leg contact and another of seeking knee contact.

Touching for Mutual Companionship occurred in all three classrooms, and in about the same number of cases (2 to 3). This category does not depend on who initiates the touching contact, but on the duration of time of the contact -- roughly

this would be anything over one-half minute.

Some observed examples of Mutual Companionship were:

Mutual foot contact.
Mutual knee contact.
Mutual leg contact.
Mutual body contact.
Mutual hand contact.

Only one case of hand-holding was observed, and one instance of body contact for companionship. The other eight observed mutual contacts involved the knees, legs or feet.

2. Expressive

This category denotes a quality of affective expression which children displayed by touching, either as individuals or in a mutual interaction, while still attending to the subject matter of the film. The last part of this statement is very important because if the attention is not on the presentation, the touching would be coded Affectionate. Expressive behavior was found in both Individual and Mutual sub-headings.

Individual Expressive examples:

A little three year old boy hid behind his friend, looked out at the screen, touched his friend with both hands as he smiled, screamed and continued to watch the film.

A little girl in the Fours, showing obvious facial pleasure while looking at the teeth of a dinosaur on the screen, grabbed at her partner,

touched his chest, put her head in front of him and then held both of his arms while still looking at the teeth of the dinosaur.

A five year old girl reacted to the dinosaur's teeth by leaning her shoulders against her friend, another little girl, while she laughed and said "Look at all his teeth." She immediately withdrew, but soon leaned over and quickly touched shoulders two more times, then pur her hand on the other girl's chest, and finally placed her hands on her friend's face, talking all the time, and watching the screen while expressing her feelings about the large row of teeth.

Mutual Expressive touching examples:

Mutual Expressive touching was not seen in the Threes. It was observed in only one pair of Fours and one pair of Fives.

The four year old girl mentioned previously (Individual Expressive) interacted with the boy who was her partner by mutual grabbing at each other in pleasurable excitement about the dinosaur's teeth while watching the film.

A similar situation was seen when two five year old boys hugged each other while looking at the screen. However, this expression spilled over into affectionate hugging and laughing, and they forgot about the screen for a short time.

3. Cognitive

The cognitive category of touching is rather tentative. However, we are all aware of the example of Helen Keller learing to communicate by sense of touch. In this study I observed one example of Mutual Cognitive touching, which was certainly a shared learing experience. It happened when two boys were both trying to listen to the timer, which one of the boys had held to his ear. The other child leaned into the first boy and deliberateiy touched arms, shoulders and fingers in an effort to be close enough to hear the timer with his ear at the same time that his friend was listening.

The last of the three new categories were observed only in the sub-heading Individual, with no examples of Mutual.

4. Control

The definition of this category might follow one of the dictionary examples: to restrain, to hold from action. There were few examples, and none were seen among the Fours.

A three year old girl who was sitting and trying to hug the girl with her (who was trying to move away) stopped this action and then tried to bodily move her friend, even though the friend was much larger.

A more relaxed example of Control occurred

when a five year old boy's vision was obscured by his friend's knee. He reached out and gently guided the knee out of his line of vision.

A still less emphatic form of Control was seen when a Five lightly touched his friend as the friend stood at the end of the film. The touch quite clearly said, "Wait! Don't go yet" although not a word was exchanged.

5. Extension of Verbal Communication

Only one example of this was seen in the study. A boy in the Fours said, "Did you see the dinosaur?" and then he lightly touched the girl's arm. The touch followed the verbal communication. If the touch had preceded the communication in this same instance, it would have been coded Attention-getting.

6. Exploratory-tactile

This category was observed just once during the time the children were observing the film loop. A boy in the Fours very gently but deliberately touched the knee of the other boy who was sharing the theater with him, and then he continued to lightly rub his hand over the knee. It is impossible to tell what this was communicating to the other boy, but the knee was not withdrawn. There was no other interaction at the time.

This behavior was very reminiscent of the self-communication (?) which a three year old girl seemed to be experiencing when she stood alone at the back of the theater and lightly ran her fingers back and forth over the wood paneling of the screen which formed part of the theater.

SUMMARY

This exploratory study of "Touching: Communication During a Quiet Activity" demonstrated that touching as a communicative behavior can be observed and categorized. The following information, applicable only to the three classrooms studied at the Center for Young Children, can be cited:

1. Touching behavior differs quantitatively among each of the categories within an age group. (Tables 1, 2 and 3)
2. Touching behavior differs quantitatively among each of the categories when comparing age groups. (Tables 1, 2 and 3)
3. The total number of touching contacts was not related to age.
   (1) The Threes had 55 contacts, or an average of 3.4 for each pair of children.
   (2) The Fours had 24 contacts, or an average of 1.5 for each pair of children.
   (3) The Fives had 64 contacts, or an average of 3.6 for each pair of children. (Tables 1, 2 and 3)
4. The Rank Order of the number of touching contacts indicated that the category Other was first in the Three and Four Year Groups, and that Accidental was first over Other by a slight margin in the Five Year Group. (Table 4)
5. The categories of touching contacts, expressed in percentages of total contacts for each age group

were calculated and were a most revealing way of viewing this data. (Table 5)

6. The variations in the number of touching contacts, within each class, and among the three classrooms were obtained. These were shown by pairs for the seven categories. (Table 6)
7. A selected sample of individual children's touching behavior was developed. (Table 7)

This exploratory study also evaluated the "Form for Observation of Physical Contact" and found that its categories were useful in developing a modified Form, using the seven original categories. The data indicated that Fear and Required Contact. were two categories which were not found in this study. The category Other was used extensively, and the researcher feels it has not been precise enought. Content analysis of the data leads to the development of a proposed group of six new categories for communicative touching behavior. These six new categories would be sub-divided further in some cases into Individual and Mutual. The proposed new categories for touching are:

1. Companionship
2. Expressive
3. Cognitive
4. Control
5. Extension of verbal communication
6. Exploratory-tactile

These six would be added to the original seven categories: Aggressive, Attention Getting, Fear, Required Contact, Accidental, Other and Affectionate. This would be a total of thirteen categories of touching behaviors.

Further exploratory research is needed to determine if these categories would be satisfactory for other populations. Further investigation should also be done of the sub-categories of Individual and Mutual. The data in this study were only analyzed in this manner for the category Other as the six new categories were developed.

As a final word in the Summary, the most interesting and possibly the most meaninful result of this study for the researcher has been the growing awareness of the tremendous complexity of the communication channel -- touching!

IMPLICATIONS

Dr. Montagu elaborates in his book, TOUCHING: The Human Significance of the Skin, that: (1) touching is the first sense organ through which a baby experiences communication; (2) the skin is the largest sense organ, because the entire body is covered with skin which is the receptor for tactile stimulation, touching; and (3) the younger the child, the closer he is to his initial awareness of communication through touching.[12]

These three ideas raise some interesting questions for anyone working in the field of Early Childhood Education. The research of this study, "Touching: Communication During a Quiet Activity", explored touching in one setting, the Center for Young Children, among thre, four and five year old children during once activity, viewing a continuous-loop film with one friend. The findings showed that there is, in fact, a large quantity of communication going on among these children by way of touching. Furthermore, the findings open the door to the tremendous complexity of the messages which the children appear to be sending and receiving by way of touching communication. Taken together, these two findings suggest the difficulty of grasping the full significance of touching as non-verbal communication, and they also suggest a multitude of broad-spectrum questions which are presented now in no particular order.

1. What value do individuals in the American culture

place on non-verbal communication in general? Specifically, what value does the society put on touching, as communication? Does the value vary depending upon the age of the individual? Does the value differ depending upon the economic, ethnic or racial background of the individual within the total culture?

2. How aware are teachers of young children of the many categories of communication which can be displayed by touching? Would a higher level of awareness by these teachers contribute to a greater acceptance of touching as a mode of non-verbal communication? Should teachers in Colleges of Education place greater stress on the value of non-verbal communication, including touching?

3. What happens in school to children whose family "touching patterns" differ markedly from those of their peers?

4. To what extent have very young children been enculturated to the belief (Unspoken assumption?) that affectionate touching outside of the close family circle is a "no-no"?

5. If teachers become more accepting of children who use touching as a means of communicating, what is the teacher's further role? Does the teacher touch the child more? What are the possible ramifications if teachers do more touching? Is this a legal question or a matter of adult education?

6. Could the role of touching be taught in the new

Education for Parenthood courses which are beginning to be introduced at high school level? Could the role of touching be stressed in the high school and college Child Development courses?

7. If touching could be taught, in the sense of helping adolescents and young adults - future parents - become more aware of the value of touching as deep communication (Montagu), would this be enabling both for their children and their marriages?

It is the belief of this researcher that communication by touching is not only the first method of communication but also the most basic form of communication. Until we honestly accept touching with the candor and grace of the very young, I feel that we are cheating ourselves and our young children through unnecessary inhibitions and over-strict prohibitions.

A LOOK AHEAD

The investigation and results of this exploratory study were based upon the previous work of Marilyn O. Childress, Robert Fessler, and Marian Greenblatt who developed the operational definitions and category system for physical contact found in Occasional Paper Number One, Preliminary Investigation Into Moral Behavior With An Emphasis Upon Perception of Physical Contact by Five Year Olds.

It seems appropriate now to present the combined operational definitions of both studies. In addition, two new proposed forms have been developed. The first, the Form forObservation of Touching Contact, might be used: (1) to record in diary fashion the touching behavior of two students simultaneously, both independent touching and mutual touching, or (2) to record in diary fashion for the purpose of practice in identifying behaviors by category in order to facilitate the use of the second form as the original form for data collection. The second proposed form, the Form for Coding Touching Contact, might be used: (1) to tally results when the observational form is used as the first instrument, or (2) to tally direct observations when a study calls for only quantitative information and diary fashion recording is not desired.

A. Operational Definitions of Categories of Touching Contacts

1. Fear-motivated contact:

Any contact that is motivated by fear of something or someone other than the person with whom one is in contact. This includes: embracing, grasping, when an object of fear is present.*

2. Aggressive contact:

Any contact which appears to be motivated by negative feelings or appears to be a deliberate hostile act. The following are examples of aggressive behavior: hitting, pushing, kicking.*

3. Control-by-contact:

Any contact which attempts to restrain another person, or to keep him from an action, or physically to move or guide another person. Examples might include: picking up a person, blocking a person's path by physical contact, or removing another's arm from your line of vision.

4. Attention getting contact:

Any contact which appears to be motivated by getting the attention of someone else. It includes tapping another person on the hand, shoulder, etc..*

5. Accidental contact:

Contact that appears to be unintentional. It includes the following: brushing past a person, touching a person, touching a person when engaged in an activity

in which people are close to each other but are not required to touch one another.*

6. Exploratory-tactile contact:

Any contact in which the dominant behavior is exploration by means of the sense of touch. This includes an observation such as: one child feeling another child's hair by stroking it (or it could be clothing, etc..) while still attending to some other person or task. The exploratory-tactile behavior must be secondary to some other task.

7. Cognitive contact:

Any contact, utilizing the sense of touch, in which the primary motive appears to be learning by touch. Examples would include: children "feeling" the wrist of another child to determine the size of the wrist, or two children squeezing hands to see who is stronger.

8. Extension of verbal communication by contact:

This contact follows or accompanies some form of verbal communication, and emphasizes it. The contact would not have an affective component such as a hug or a slap. It includes: touching a person when giving a direction, etc..

9. Required contact:

Contact required by rules or by an authority figure. It would include the following: contact during games which require contact, or holding hands when a teacher requests that students hold hands.*

10. Companionship contact:

Contact, involving any part of the body, with another person's body, in which the other person does not withdraw and the contact is maintained for a period of time. Examples include: two children touching legs during a story-time, two children holding hands while watching a movie, etc.. The contact must be secondary to the primary interest of the children.

11. Expressive contact:

This contact, highly affective in nature, is an exuberant attempt by one person to express and share with another person his pleasure in what he is experiencing. The primary focus is on the experience, and the touching contact is only secondary, and is not maintained. This includes: a quick embrace, impulsive grasping, etc. such as during the excitement of a close football game.

12. Affectionate contact:

Any contact which appears to be motivated by positive feeling toward another person. It includes the following types of contact: hugging, helping, holding hands, telling secrets, intentional contact while playing with another person.* To this original definition a limitation is now needed. Affectionate behavior must be the primary focus of the individual at the time.

13. Other contacts:

Any contact which cannot be included in the previous categories. *

* Definitions which are followed by an asterisk are the original definitions from Occasional Paper Number One, pages 14 and 15, see Notes, 2.

FORM FOR OBSERVATION OF TOUCHING CONTACT

Date

Observer

Category - Code

1. Fear
2. Aggressive
3. Control
4. Attention Getting
5. Accidental
6. Exploratory-Tactile
7. Cognitive
8. Extension of Verbal
9. Required contact
10. Companionship
11. Expressive
12. Affectionate
13. Other

Description: Type of Contact		
Student A	Mutual	Student B

FORM FOR CODING TOUCHING CONTACT

Date

Observer

Category of Contacts	Numbers of Contacts		
	Student A	Mutual	Student B
Fear			
Aggressive			
Control			
Attention Getting			
Accidental			
Exploratory-Tactile			
Cognitive			
Extension of Verbal			
Required Contact			
Companionship			
Expressive			
Affectionate			
Other			

Remarks:

APPENDIX A

FORM FOR OBSERVATION OF PHYSICAL CONTACT

(Modified for observation of two students simultaneously)

FORM FOR OBSERVATION OF PHYSICAL CONTACT
(Modified - observation of two students simultaneously)

Code

1. Aggressive
2. Attention Getting
3. Fear
4. Required Contact
5. Accidental
6. Other
7. Affectionate

_____
Date

_____
Student A

_____
Student B

Description: Type of Contact

Student A	Student B	Mutual	Code

* by any number indicates vocal communication during contact.

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APPENDIX E

ADDITIONAL INFORMATION DERIVED FROM THE OBSERVATIONS

I The THREES

The Threes seemed to exhibit:

1. Much physical movement in the theater ... up - down, individual change of position and exchange of positions by partners.
2. Much inattention to the film.
3. A low level of awareness of dinosaurs in so far as their verbalizations were concerned. An extreme example was the boy who watched the film for three minutes and said, "I'm watching the film. What is it?"
4. Great distractability. Any noise or person from outside the theater moved their focus off the film.
5. A low level of awareness of the meaning of the bell when the film had run one complete cycle. Only two of eight pair said "It's over", and many had to be told to come out of the theater.

II The FOURS

The Fours seemed to exhibit:

1. A <u>great</u> deal of pointing. Seven of the eight pairs of children used pointing as a means of communication.
2. Much verbalization about the film. Six children named dinosaurs. There were also remarks such as, "Did you see the dinosaurs?", "See the man's fingers!", "Why do I have to see this?", "He had real sharp

teeth", "He's a funny face", and "Oh, I can't look!".

3. Physical movement was low compared to the Threes and Fives.

III The FIVES

The Fives seemed to exhibit:

1. Much interaction, verbal, with children coming from outside and looking in the theater.
2. More awareness of what the outside activity they heard was, while still attending to the screen, than the threes or fours.
3. More playing with the timer.
4. Interaction with the screen itself, moving up and touching it.
5. A favorite change of position - lying down to watch the screen - usually on stomach.
7. "Horsing around type playfulness" inside the theater while attending to the screen.

APPENDIX C

THE SUPER EIGHT FILM USED IN THE STUDY

DINOSAURS, Film No. ES/14
Earth Science Series
Film Associates
11559 Santa Monica Boulevard
Los Angeles, California 90025

Technicolor, Super Eight film magi-cartridge

Synopsis: Brontosaurus and Stegosaurus, dinosaurs of 140 million years ago, and Trachodon and Tyrannosaurus, of 80 million years ago, are shown in modelwork in appropriate settings. A model of a man is used to establish scale.

Running Time: three and one-half minutes

Prepared under the supervision of Dr. Peter Vaughn, Associate Professor of Zoology, University of California, Los Angeles.*

In addition, eight books on dinosaurs were made available to the classrooms, and were used in two of the rooms. The list of books is available.

* All information on the film is copied exactly from a leaflet enclosed in the plastic storage box for the film.

APPENDIX D

NATIONAL BACKGROUND OF THE CHILDREN IN THE STUDY

NATIONAL BACKGROUND OF THE CHILDREN IN THE STUDY

The children in the three classrooms in this study come from various economic backgrounds, and they, or their parents, come from many countries. The following list indicates the national background of the child, or at least one of his parents.

Country	Number of Children
Canada	1
Cuba	1
France	1
Germany	2
India	2
Italy	1
Spain	1
Sweden	2
Taiwan	3
United States *	
Black	2
Indian	1
White	29

* 47 children participated in the study. There were 9 children absent from the classrooms on the days observations were made in their classrooms, and of these nine there were six children who were bussed in to give a good racial mix. These children were absent because the public school bus transportation was not available. It was public school spring holidays.

NOTES

1. Center for Young Children, Occasional Paper Number Two, A Category System to Describe the Nonverbal Behavior of Teachers and Students: An Interim Report, College Park: University of Maryland, June 1972, p.ii.

2. Center for Young Children, Occasional Paper Number One, Preliminary Investigation Into Moral Behavior With An Emphasis Upon Perception of Physical Contact by Five Year Olds, College Park: University of Maryland, June 1972, p.16.

3. University Nursery-Kindergarten, Monograph 1, Toward New Programs for Young Children: Program and Research Possibilities, College Park: University of Maryland, 1970, pp.2-3.

4. Center for Young Children, Occasional Paper Number Five. A Study to Compare Quantitatively the Amount of Change in Facial Expressions of Pre-Schoolers and Kindergarteners in Situations Lacking Contact with Another Person and in Social Situations, College Park: University of Maryland, June 1972.

5. Occasional Paper Number One, op. cit. (Note 2. above).

6. Occasional Paper Number One, Ibid.

7. Ashley Montagu, TOUCHING: The Human Significance of the Skin, New York and London: Columbia University Press, 1971, summary pp. 289-292, "Envoi".

8. Ibid., pp.293-324.

9. Occasional Paper Number One, op. cit., pp. 14-16.

10. Ibid., p.16.

11. Form for Observation of Physical Contact, (Modified for Observation of Two Students Simultaneously), Appendix A.

12. Ashley Montagu, op. cit.,
    (1) Chapter Three, "Breastfeeding", pp.64-80.
    (2) Chapter One, "The Mind of the Skin", pp.6-7.
    (3) Chapter Four, "Tender, Loving Care", pp.81-160.